


Work Order ID 119735

May-20-14 1:10:46 PM

119735

Rev A Day with 5/14/08/27
PRELIMINARY ISSUE

Page 1

Item ID: D5077-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: ~~PRELIM~~ *Revised* Stop *NS2*
 Item Name: Spacer
 Start Date: 22/05/2014 Start Qty: 20.00 *20* Cust Item ID:
 Required Date: 23/05/2014 Req'd Qty: 20.00 *20* Customer:
 Reference: 

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D5077	<i>Rev A</i>								
100	Hardinge CNC LATHE SMALL	0.00							
100									
Hardinge	Memo	0.00							
Hardinge CNC Lathe Small	1-TURN AS PER FOLIO FB3032 & DWG FOLIO REV: <i>N/A</i>								
	DWG REV: <i>A</i>								
	2-DEBURR AS REQUIRED								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									

Jul 20 *φ* *14-5-22*

Jul 20 *φ* *14-5-22*

Work Order ID 119735

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Page 2

May-20-14 1:10:46 PM

Item ID: D5077-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: PRELIM Stop *NS2*
 Item Name: Spacer
 Start Date: 22/05/2014 Start Qty: 20.00 *20* Cust Item ID:
 Required Date: 23/05/2014 Req'd Qty: 20.00 *20* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00				20	0		DAS 20 9-88 14-05-23
120									
QC	Memo	0.00							
Quality Control									
130	Identify as per dwg & Stock Location <u>ST 135</u>	0.00							
130									
Packaging	Memo	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

POSITIVE RECALL

EFFECTIVE _____ AUTH _____

RELEASED 8 DATE 14/05/27

to Rev A Dn only

20X 14-5-23

DAS
26
9-89

14/9/99
~~14-5-23~~

14-5-26

Picklist Print

May-20-14 1:10:43 PM

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Work Order ID: 119735

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Parent Item: D5077-1

D5077-1

Parent Item Name: Spacer

Start Date: 22/05/2014

Required Date: 23/05/2014

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP REV:A NEW ISSUE 14-05-13. JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M303R0.750

Purchased

No

f

73.5440

1

M303R0 750

**

14-5-22

DAS
13
9-89

303 Round Bar 0.750

Location

Loc Qty

Loc Code

MAT028

73.544

m127464

48.948

m128882

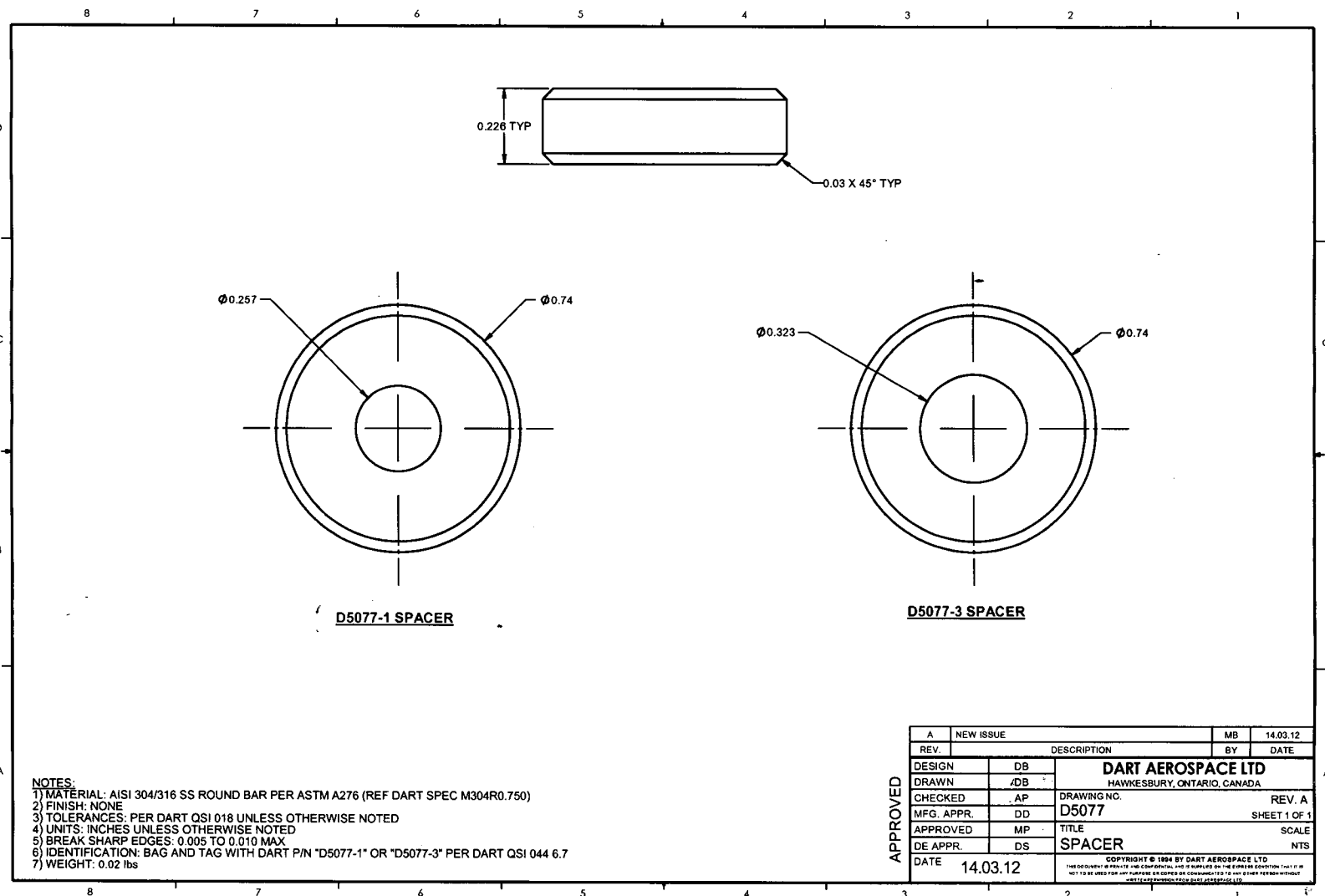
24.596

M304 R0.750

DFB
14/05/22

128496

1 Rest



NOTES:

- 1) MATERIAL: AISI 304/316 SS ROUND BAR PER ASTM A276 (REF DART SPEC M304R0.750)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: BAG AND TAG WITH DART P/N "D5077-1" OR "D5077-3" PER DART QSI 044 6.7
- 7) WEIGHT: 0.02 lbs

A NEW ISSUE		MB	14.03.12
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DB		
CHECKED	AP	DRAWING NO.	REV. A
MFG. APPR.	DD	D5077	SHEET 1 OF 1
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	SPACER	NTS
DATE	14.03.12	COPYRIGHT © 1994 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	

This document may be out-of-date because
it has file references that may have been updated. (more...)

Receiving Report

Date: 14/3/13

Batch No: 1122496

Supplier: MEPAUCASTVE

Dart P/O: 23252

Packing Slip: Yes ☒ No ☐
 Invoice: Yes ☐ No ☒
 Receipt: Cash ☐ Cr ☒
 New Supplier Yes ☐ No ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐
 Waybill Attached: Yes ☐ No ☒ N/A ☐
 Shipment Complete: Yes ☒ No ☐ N/A ☐
 QC18 Inspection ☒ N/A ☐
 Work Order ☐ N/A ☒

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Rec'd	Quantity Short	Quantity Inspected	Quantity Rejected	Comment / NCR Number
M174 B0-5002000		12	0	12			
M174 B1-5002000		12	0	12			

Initials of Receiver

QC12

Production/Admin:

Date _____
 Received/Costing _____
 Initial _____

Location _____

Page 1 of 1

All amounts are calculated in domestic currency.

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
VendorID\Vendor Name		VC-MET001	Metaux Castle								
PO23252	3		M303H0.500	f	3/14/2014	3/13/2014	12.0000	\$3.91	0.0000	0	\$46.92
CAD	No		303 HEX BAR .500	f	12.0000	DESJ02		\$46.92	0.0000	0	
			M128496								
	4		M303R0.500	f	3/12/2014	3/13/2014	48.4167	\$1.58	0.0000	0	\$76.51
	No		303 Round Bar 0.500"	f	48.0000	DESJ02		\$76.51	0.0000	0	
			M128496								
	5		M303R1.000	f	3/12/2014	3/13/2014	48.6667	\$6.08	0.0000	0	\$295.76
	No		303 Round Bar 1.00	f	48.0000	DESJ02		\$295.76	0.0000	0	
			M128496								
	6		M304RO.750	f	3/12/2014	3/13/2014	97.3333	\$3.35	0.0000	0	\$326.08
	No		304SS Roundbar .750	f	96.0000	DESJ02		\$326.08	0.0000	0	
			M128496								
	7		M304R1.250	f	3/12/2014	3/13/2014	12.8333	\$9.47	0.0000	0	\$121.56
	No		304 round bar 1.250	f	12.0000	DESJ02		\$121.56	0.0000	0	
			M128496								
	8		M304B0.750X2.500	f	3/14/2014	3/13/2014	12.7500	\$26.08	0.0000	0	\$332.50
	No		304 BAR .750 X 2.50 f		12.0000	DESJ02		\$332.50	0.0000	0	
			M128496								
Total Received Quantity:											232.0000
Total Qty to Inspect (PO U/M):											0.0000
Total Reject Quantity:											0.0000
Total Receipt Value:											\$1,199.33
Total Balance Due Quantity:											0.0000

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:2080667

Ship From: A. M. Castle & Co. (Canada) Inc. MONTREAL - CASTLE METALS 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 12-MAR-2014	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 2080667-2	

Shipment Details	Final Destination Branch - MON
-------------------------	---------------------------------------

Order No 3258142	Line No 5	Item No 14824	Description 0.7500.RD.304/304L STAINLESS.CF.ANN.132.0000-156.0000 SPECIFICATIONS:-ASTM A276 ALL-PAPERWORK-MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S FORWARD COPY OF P/S TO TRACY (MONTREAL) Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS				
Purchase Order No 23252		Part Number		Ordered Qty 96.00 FT		Invoice Qty 97.3333 FT	
Details			ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S FORWARD COPY OF P/S TO TRACY (MONTREAL) Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS				
Delivery No. 119551963	Mill VALBRUNA CORPORATION	Heat Number 250549	Mech Id	PCS 8	Width (IN)	Length (IN) 146.0000	Shipped Qty(LBS) 146.0000

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.
Date Printed: 12-MAR-2014 11:52:54 AM

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO ABNAHMEPRUEFZEUGNIS INSPECTION CERTIFICATE CERTIFICAT DE RECEPTION EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Cliente / Besetzer/Kunde/Client
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
L5T 5Z1-MILTON, ONT L5T 5Z1-CA

Produttore: ACCIAIERIE VALBRUNA S.P.A.
Hersteller/Usine producer

Avviso di Spedizione: D-VI12010639
Lieferanzug/Packing list/B.L.

Ordine nr: 203003611 STOCK
Bestell/Vor order/Commande

Certificato nr: MEST183128/2012/
Prüfung/Test/Essai

Conferma ordine nr: E112002961
Werkz/Odr/Ref nr.

Marchio di Fabbrica:
Zeichen des Werksachverständigen
Trade mark
Sigle de l'usine productrice



Stato di fornitura: - Annealed Cold Drawn
Lieferzustand/Delivery state/Etat de livraison

Tipo di Elaborazione: E+AOD
Erzielungsprozess/Melting process/Mode d'elaboration

Punzone del Collaudatore:
Stempel des Werksachverständigen
Inspector's Stamp/Pointon de l'essayeur



Specifiche:
Anforderungen / Requirements / Exigences

VS10 304/304L A
AMS 5647 J S30403 A
ASME SA193 2010 B8 CLASS1 (1)
ASME SA479 2010 S30400/03 A (4)
ASTM A262 2010 PRACTICE E
ASTM A320 2011 B8 CLASS1
ASTM A479 2011 S30400/03 A
QQ-S-763 F 304/304L A

AISI 304/304L
AMS-QQ-S-763 B 304/304L A
ASME SA276 2010 S30400/03 A (2)
ASTM A182 2011A S30400/03 A (5)
ASTM A276 2010 S30400/03 A
ASTM A370 2011A
MIL-S-882 B/1 304/304L

AMS 5639 H S30400 A
ASME SA182 2010 S30400/03 A (0)
ASME SA320 2010 B8 CLASS1 (3)
ASTM A193 2011A B8 CLASS1
ASTM A314 2008 S30400/03
ASTM A473 2001 S30400/03 (6)
NACE MR0175 2009 S30400/03 A (7)

- (0) SEC.II PT.A 2010 EDITION ADD. 2011a
(1) SEC.II PT.A 2010 EDITION ADD. 2011a
(3) SEC.II PT.A 2010 EDITION ADD. 2011a
(5) For products machined directly from bar refer to ASTM A479.
(7) ANSVNACE MR0175/ISO 15156-3, second edition 2009-10-15

- (0) For products machined directly from bar refer to ASME SA479.
(2) SEC.II PT.A 2010 EDITION ADD. 2011a
(4) SEC.II PT.A 2010 EDITION ADD. 2011a
(6) Chemical analysis only.
(7) Technical circular 1:2011 Published 2011-06-14

Qualità: T-304L
Werkstoff/Grade/Qualité

Marca: MVAISL MAXIVAL		Tolleranza: Tol. ASTM A484		Punzonatura: 304/304L			
Pos. nr. Pos. nr. Item nr. Nr. de posn	Oggetto Gegenstand Product description Descrip. du produit	Dimensioni - In Abmessungen Dimension Dimension	Lunghezza - In Länge Length Longueur	Colata Schmelze Vetal Coulee	Pezzi Stückzahl Pieces	Peso - LB Gewicht Weight Poids	Lotto nr. Lotnr. Lot nr. Lot nr.
0180	Round	0,7500	144 / 146	250549	1	3.247	130701330

TEST ALLO STATO DI FORNITURA									
Test on delivery condition Prüfung auf lieferbereiten produkt test à l'état de livraison Prueba sobre el material así como entregado									
TEST	Provetta/probe coupon/Etampion 100 mm Bar St 10 mm Bar With Bar Thickness 100 mm spez. mm	σ F Tensile Tensile Tensile	Snervamento Streckgrenze Yield Stress Yield Strength Rp 0,2 % k.s.i.	Snervamento Streckgrenze Yield Stress Yield Strength Rp 0,2 % k.s.i.	Resistenza Zugfestigkeit Tensile Strength Resistance à traction Rm k.s.i.	Allungamento Zugdehnung Elongation Allongement E 4d %	Strizione Zugdehnung Reduction of area Striction RA %	Resilienza Anschlagwert Impact Value Resilience	Durezza Härte Hardness Dureté HB
	Valori richiesti 1 Anforderungen/Required values Valeurs demandées	min max	30	-	75 115	40	50	-	140 235
A	12,5	68 L	72	-	100	44	67	-	235

Mechanical properties according to ASTM A370.

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata / Heat Schmelze/Coulee	min max 0,030	1,00	2,00	18,00 20,00	1,00	1,00	8,00 10,50	0,040	0,020 0,030	0,100	-	-	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	-	-	-	-
250549	0,016	0,55	1,78	18,14	0,39	0,45	8,06	0,110	0,028	0,030	0,087	-	-	-	-

Produced without class I-II Ozone depleting substances.
Solution heat treated free from continuous carbide network.
Annealing temperature: 1940°F for 0.5 h/water.
Micro and macro etch test: OK
Intergranular corrosion test per ASTM A262 pract. E: ok.
Material is DFARS Compliant

Vicenza, 03/04/12 VCO009 (Mod. MCE2)	Il collaudatore di stabilimento / der Werksachverständiger / Works inspector / L'agent d'usine M. Rizzotto	Pagina - 1 di 2
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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO23252

Purchase Order Date 3/6/2014
PO Print Date 3/6/2014

Page Number 3 of 4

Order From : VC-MET001
METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - C/O 910720
P.O. BOX 4090 STN A
TORONTO, ON M5W OE9
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 514 694 9575

Ship To Contact
Ship To Phone
Ship Via: VENDOR'S TRUCK
Ship Acct:

Buyer
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Total: \$323.04

6 M304R0.750 304 SS Roundbar .750 3/12/2014 96.00 3/12/2014 97-3333
Yes f
MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276
NOTE: AISI 303 NOT ACCEPTABLE

Line Total: \$356.16

7 M304R1.250 304 round bar 1.250 3/12/2014 12.00 3/12/2014 12-8333
Yes f
MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276
NOTE: AISI 303 NOT ACCEPTABLE

Line Total: \$125.88

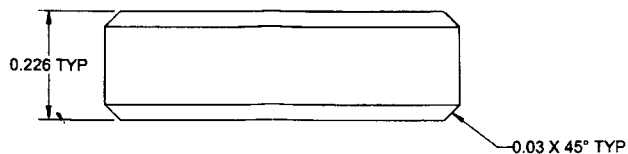
8 M304B0.750X2.500 304 BAR .750 X 2.50 3/14/2014 12.00 3/14/2014 12.75
Yes f
MATERIAL: AISI 304/316 SS BAR OR AISI 304/316 SS PLATE
AS PER ASTM A276 OR ASTM A240
NOTE: AISI 303 NOT ACCEPTABLE

Note:

3/6/2014

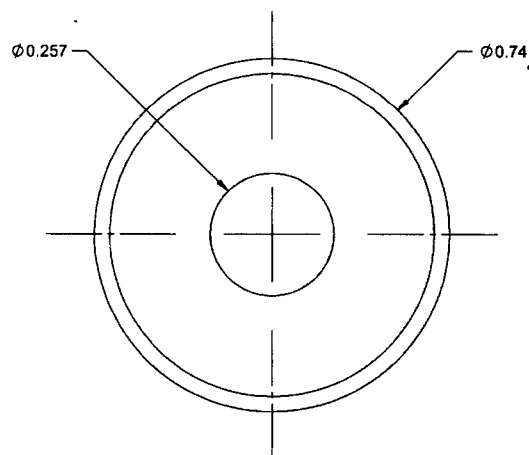
8 7 6 5 4 3 2 1

D



D

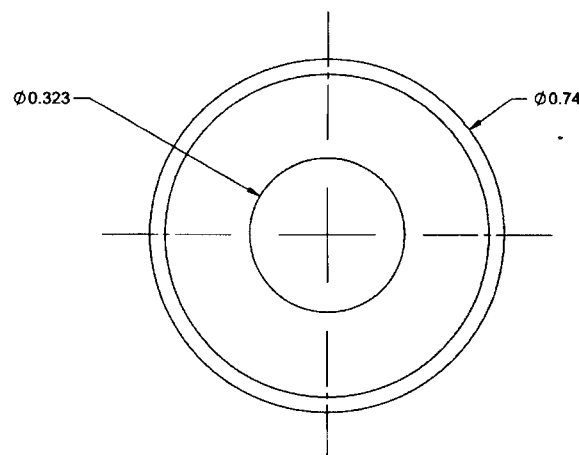
C



D5077-1 SPACER

C

B



D5077-3 SPACER

B

RELEASED
2014-08-27

A

NOTES:

- 1) MATERIAL: AISI 304/316 SS ROUND BAR PER ASTM A276 (REF DART SPEC M304R0.750)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: BAG AND TAG WITH DART P/N "D5077-1" OR "D5077-3" PER DART QSI 044 6.7
- 7) WEIGHT: 0.02 lbs

APPROVED

A NEW ISSUE		MB	14.03.12
REV.	DESCRIPTION		BY DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DB		
CHECKED	AP	DRAWING NO.	REV. A
MFG. APPR.	DD	D5077	SHEET 1 OF 1
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	SPACER	NTS
DATE	14.03.12	<small>COPYRIGHT © 1994 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

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8 7 6 5 4 3 2 1